

COMPLUTENSE UNIVERSITY OF MADRID

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MASTER'S FINAL PROJECT

**RESEARCH INTO THE CONSTRUCTION, DECONSTRUCTION AND POETICS OF REAL-TIME
NARRATIVE**

Performative Practice in Live Cinema



Frame from the Live Cinema performance COTIDIANO

Author: Nathalie Simonetti

Supervisor: Jaime Munárriz

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Abstract

This text, entitled Research into the Construction, Deconstruction and Poetics of Real-Time Narrative: Performative Practice in Live Cinema, arises from the need to investigate languages and content related to the construction of narrative in real time within the artistic field of contemporary audiovisual performance. I am interested in exploring in greater depth the various practices that expand the boundaries of the cinematic concept. Although the action takes cinematic language as a reference, it deconstructs its narrative language. The practice of meta-narrative involves the use of software, the introduction of elements specific to performance, and constant visual manipulation: transitions, movement, atmosphere, visual purity and the tension between elements that alter cinematic concepts. It is a live art form that requires both performance and an audience. Sound and visual creators work on an equal footing, attempting to explore every expressive possibility through collaboration.

Keywords / Attributes

Audiovisual performance, Live Cinema, editing, narrative, audience, visuals.

Hypothesis

The art/technology pairing becomes increasingly significant when we understand the trajectory of art in relation to its technical transformation. We constantly see artists employing technologies in the production of their works. In this study, I investigate how contemporary creators can express themselves using the tools of their time and, above all, how they combine new resources and established cinematic concepts with other disciplines, producing a clear multiplicity, hybridisation and constant transformation of languages, as well as an ongoing search for creative solutions and practices.

“New media attract innovators, iconoclasts and risk-takers, so some of the most active creative minds spend their time experimenting with new technologies they barely understand.”¹

Object of Study

The object of this study is the reflection on, creation, post-production and mixing of images in real-time audiovisual performance.

Methodology

This research project is developed through both a theoretical and a practical component. The practical starting point was to create a Live Cinema performance entitled COTIDIANO that could reflect on new forms of narrative construction and deconstruction, as well as on the mixing of images performed in real time. The theoretical component is based on curiosity and an interest in finding the information necessary to support and contextualise my practice.

¹MANOVICH, L. (2005). El lenguaje de los nuevos medios de comunicación, La imagen en la era digital. Madrid: Paidós Comunicación. 2011, 3rd ed.

Motivation

I am fascinated by the hybridisation of cinema with performance, hardware/software and poetry. Creating and presenting a moment, a sensation, or simply articulating a visual stylistic discourse is more than a simple mixing of images. I define it as a “visual haiku”: filmed images, pre-produced and post-produced, mixed according to their timing and visual weight, supported by an appropriate sonic resource. I construct this unknown path, which will lead me to analyse its problems, justify the means employed and, ultimately, allow myself to be surprised by the result. Performance, through the live mixing of images, leads me to reflect on the use of the screen, computer and projector as media for narrative and sonic experimentation.

Reflection on the Use of New Technologies, Multiplicity and Hybridisation in Cinema

Walter Benjamin suggests that “technique” can be understood as manufacture or manual work: the artist's action in producing a work using their hands without the aid of a mechanism. “Technology”, on the other hand, can be understood as a process of evolution involving increasingly sophisticated mechanisms, based on scientific principles, intended to replace human effort in particular areas.² This evolution produces a distancing of the artist's hands from the artistic object. The process of constructing the work comes to depend on an imagined project subjected to scientific principles applied through machines. In practice, technology implies a reduction of physical effort as the artist leaves manual craftsmanship behind. The result is a work without a record of the body's tensions; the work becomes, to a large extent, a mental action.

What matters is understanding that technique and technology are means rather than ends. The artistic object depends first on an elaboration that passes through reason and emotion and on the development of its own poetics.

New technologies give artists the possibility of investigating new creative processes. The artist confronts a work or problem by appropriating technological media in order to question, expose and create, thereby interrelating interdisciplinary perspectives. Artistic activities juxtaposed with areas of knowledge as diverse as biology, chemistry, physics, the social sciences, anthropology, sociology, economics and politics can change the direction of contemporary art, bringing it increasingly close to the issues of contemporary life.

Some poets directly appropriate technological media in order to create their projects. Concrete poetry is an example that defines the use of a medium according to an artistic objective. In the specific case of the concrete poem, several languages are rapidly absorbed, encompassing different media simultaneously. Through the very construction of the poem, it calls for technologies that were unavailable at its beginnings and even for the development of new resources. The Brazilian concrete poet Augusto de Campos is an example: his trajectory demonstrates a continual practice of appropriating new technologies.

“A large part of what I did in poetry was intended for the animated digital universe — poetry in colour and in motion, which I have always liked and which is now at my fingertips. That is the path that challenges me most. But the computerised tools that have filtered my production for more than ten years also produce a poem for paper and for the book. [...]”

²BENJAMIN, W. (1994). Obras escogidas: magia y técnica, arte y política. São Paulo: Brasiliense.

*Some of these poems are static versions of digital clip-poems, 'poemovies', in which animation provides the pulse.'*³

³CAMPOS, A. (2003). Não Poemas. São Paulo: Perspectiva.

Definition – Live Cinema

Within the context of the emerging audiovisual arts field, Live Cinema is characterised by a set of practices that expand the boundaries of the cinematic concept. Although the action takes cinematic language as a reference, it deconstructs its narrative language. Meta-narrative practice involves the use of software, the introduction of elements specific to performance, and constant visual manipulation.

This idea is not new. We can say that the activity already existed with the magic lanterns of the seventeenth century, optical devices that preceded the cinematograph. Developed from the design of the camera obscura, which received images from outside and made them visible within, the magic lantern reversed this process and projected images outward. The lineage extends to the Lumigraph colour organ invented by Oskar Fischinger in the 1950s. Likewise, experimentation at the origins of cinema began to generate some of what would later become live-manipulated video. Emblematic cases include cinema produced under the influence of Jack Smith, who carried out real-time montage by cutting and joining film live — as in *Buzzards Over Bagdad* (1952).⁴



Fig. 1. Magic lantern

The use of new technologies has increasingly come to be considered a contemporary and specific practice, with its own genres: visual-music pieces oriented toward the visualisation of sound; video-scratching performances, similar to VJing but without the dance floor; works based on software art, in which no pre-existing visual material is used and only code is present; live-camera performances without editing; works using visual content from the Internet, such as WJs or “webjays”; and projections that use urban space as a screen. Real-time montage, design, painting, code and animation are further examples of these contemporary practices.

Today, a considerable number of artists and theorists are interested in reflecting on this genre. Questions such as “What is Live Cinema?” stimulate investigation into a concept that still has no exact definition, which is why it is often confused with “Live Video” or audiovisual material in general. Many creators, however, generate their visual resources with software and refrain from using live-action images, which would otherwise be characteristic of Live Cinema. Until a broader or more coherent term is established, the nomenclature of this artistic activity remains open.

⁴To learn more about this artist's work, visit: <http://cinepanorama.wordpress.com/2010/06/21/jack-smith/>

As a provisional definition, “Live Cinema” may be understood as a term for the simultaneous execution of images, sounds and data by visual artists, sound artists or performers presenting their works to an audience. These are presentations in which improvisation and access form part of a process that opens the possibility of creation and experience for the audience: an expanded audiovisual experience that may also be understood as sensory and immersive.

Live Cinema can also be described as live “cinema”: a performance in which the director, filmmaker, performer or artist executes the film directly in front of the audience. The artist may change the ending of the film, generate new images and sounds, create new sequences and, above all, construct different kinds of narratives based on the relationship between the audience and the work. In this experience, the artist presents the work as an audiovisual composition, as remixes of established films and/or as experimental works of conceptual or linguistic research. It is not a finished work, but rather the possibility of articulating elements in combinations and recombinations that never repeat, creating a unique audiovisual work-experience-performance.

Contemporary Live Cinema includes filmmakers such as Francis Ford Coppola, with his performance *Twixt*, and Peter Greenaway, with *The Tulse Luper Suitcases*.⁵ Greenaway's discourse is clear when he states that cinema is dead and that new languages must be sought in order to innovate in storytelling. *The Tulse Luper Suitcases* was one of the pioneering projects in this format: a long and ambitious project to which I will return later. Peter Greenaway states:

*“I am supposed to have the reputation of being a European film director. I think it's self-evident that over the last twenty years the nature of cinema — or at least what I do, which I suppose falls under what people call 'European art cinema' — has been changing rapidly. It is changing politically, socially, and, to my great interest, it is changing in its language, its aesthetics. I simply think that there are no longer any interesting film directors, and that those who are interesting are working on other projects, such as video, the web, or the new generations of digital multimedia creation.”*⁶

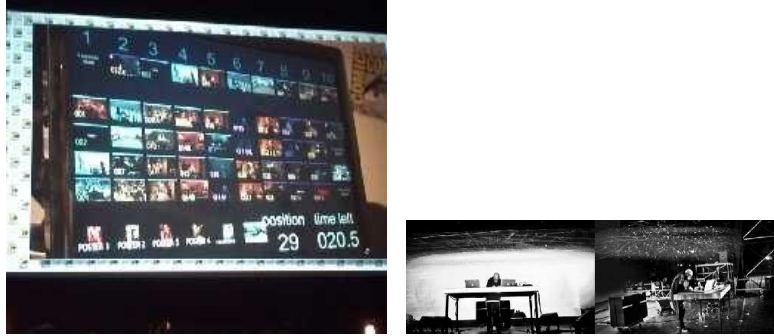
And he continues:

*“So I am looking for the different ways of manifesting what I call non-narrative cinema in the present tense. One of the routes open to me is the notion of VJing, where images are not sustained by text but by music; in a sense this produces a new relationship of bondage, but it seems to me that this relationship offers greater freedom — it saves you from having to involve yourself in matters of plot, complication and resolution, for example. And there is a kind of vibration associated with our own body.”*⁷

⁵<http://www.slashfilm.com/francis-ford-coppola/> ;
<http://cinepanorama.wordpress.com/2010/06/21/jack-smith/>

⁶GRAS, V. W. (2000). *Peter Greenaway: Interviews*. Mississippi: University Press of Mississippi.

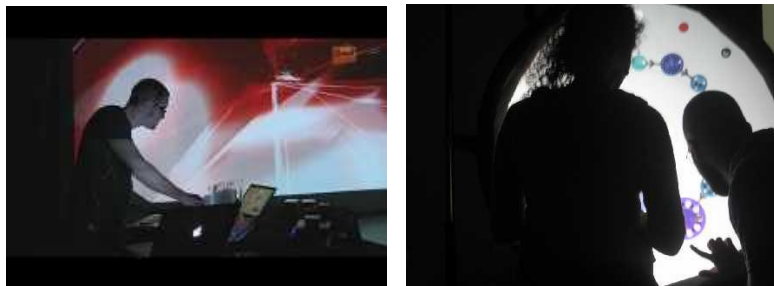
⁷*Ibid.*



Figs. 2–3. Peter Greenaway; Peter Greenaway interface.



Fig. 4. Herman Kolgen



Figs. 5–6. Bruno Vianna interface; HOL – Live Cinema.

Multimedia artists such as Canada's Herman Kolgen, Japan's Ryoji Ikeda and Daito Manabe, and Brazilians HOL (Henrique Roscoe) and Bruno Vianna contribute, through their research, works and thinking, to a form of audiovisual art that transcends medium, space and time. It is an art of its era, in which the future happens here and now, clearly realised in real time.

Finnish multimedia artist SOLU (Mia Makela), for her part, considers VJing very different from the experience of Live Cinema. For her, Live Cinema is more personal and artistic because it requires a performance in which, beyond mixing, editing and selecting images, the artist is distinguished by the specific intention to provoke and create a language. The presentation space, projection, sound, improvisation, live interpretation and contact between audience and work are the essential elements that compose the ideal atmosphere that may be called Live Cinema.



Fig. 7. Mia Makela

*"In truth, the more the arts develop, the more they depend on one another for their definition. We shall borrow first from painting and call it model. Then we shall borrow from music and call it rhythm."*⁸

The relationship between cinema and Live Cinema is strongly present. We can observe it in the ways creators employ techniques of montage, production and post-production in their works.

⁸SERGEI, E. (1967). Eisenstein. El sentido del cine / La forma en el cine / Problemas de la composición cinematográfica / Notas de un director de cine. Havana: ICAIC.

Cinema and Live Cinema

Cinema is characterised by the shot and its continuity. Shots must be understood as fragments of a single continuity that allows the audience to grasp the fundamental patterns of a scene and relate them to cues presented in other scenes. It is this continuity that gives strength to the structure of the film. The way spectators “read” the images appearing on the screen within narrative cinema was discovered by filmmakers in the earliest years of the medium.

“Is the method of harmonic montage artificially grafted onto cinematography, unrelated to our own experience, or is it simply a quantitative accumulation of an attribute that makes a dialectical leap and begins to function as a new qualitative attribute?”⁹

The cinematic principle was characterised above all by experimental language, driven by curiosity and experimentation with cinema's raw material — for example, the use of the film negative as a canvas. Numerous examples can be found from cinema's beginnings. In the 1920s, architect, painter and artist Walter Ruttmann enriched cinema as an expressive medium with his abstract *Opus Lichtspiel*, influencing later creators such as Oskar Fischinger. Viking Eggeling was respected for the precision and methodology of his drawing and for its synchronisation with music and musical structures. His visual music made him a pioneer of abstract cinema; he created geometric drawings directly on the film surface and controlled their rhythmic movement with great precision.

Hans Richter, through his film *Rhythm*.23 (1923), stated:

“I conceive of cinema as a form of modern art, particularly interesting to the sense of sight. Painting has its own peculiar problems and specific sensations, and so does cinema. But there are also areas where the dividing line is very thin, or very hard to find; specifically, cinema can fulfil certain promises made by the classical arts, at the moment when painting and cinema become friends and work together.”¹⁰

During the same period, Marcel Duchamp created *Anémic Cinéma* (1926), a notable visual poem photographed by Man Ray whose influence helped establish foundations for later movements such as Fluxus. Len Lye, another major innovator, used dyes, stencils, airbrushes, pens, stamps and surgical instruments to create images and textures directly on celluloid. His works include *A Colour Box* (1935), *Rainbow Dance* (1937) and *Particles in Space* (1966). Dziga Vertov, a member of the Kinoks group, defended the concept of the “kino-eye”: the attempt to capture the full subjectivity of reality. For Vertov, the camera captures fragments of reality that escape the human eye, and the fusion of that reality with cinema forms the basis of his aesthetic investigation. The influence of Man with a Movie Camera is evident in filmmakers such as Jean Vigo, Joris Ivens, Chris Marker and even the political cinema of Jean-Luc Godard.

These examples demonstrate the importance of experimentation at the beginnings of cinema as both a tool and an innovative mode of thought for future experimental research into cinematic language. I relate this experimentation to my project COTIDIANO, the personal audiovisual performance described in this thesis, in which I explore combinations of live-action images, design, animation and image treatments according to the psychological state of the character and the accompanying sound.

⁹SERGEI, E. (1967). Eisenstein. El sentido del cine / La forma en el cine / Problemas de la composición cinematográfica / Notas de un director de cine. Havana: ICAIC.

¹⁰FOSTER, S. C. (2000). Hans Richter: Activism, Modernism and the Avant-Garde. Cambridge, MA: MIT Press.

Today's audience continues to read the basic elements that give continuity to a film in much the same way as audiences did fifty years ago, although the way images are edited has evolved, especially with the consolidation of television. Continuity and development are central to cinematic narrative. The story is effectively born in the edit, although the axes of action constructed during filming — actors, lighting, set, make-up and costume — remain essential to the creation of scenes.

In Live Cinema, artists frequently create their own resources, construct sets, shoot films, carry out post-production, develop programming and interfaces for presenting the work, and then perform the live edit themselves. They research and seek images that attract attention, whether filmed by themselves or appropriated from other films or audiovisual works, in order to perform a new “montage”. A new visual game is created in which the linear narrativity we are accustomed to seeing is deconstructed, giving rise to a new “story” based on experimentation, intuition, rhythm, colour and composition.

Live Cinema performance is normally accompanied by projectors, screens, LEDs and experiments related to projection. Finding new settings and materials that act as catalysts for live art forms part of the creative process. Some artists, for example, find smoke to be a powerful tool for spatial creation. The use of code, colour, specific software and narrative diptychs means that the stories, sensations and emotions presented on screen demand learning and an active attitude from the spectator. It is a kind of multidimensional writing, almost Baroque or neo-Baroque, whose flow of simultaneous images and sounds requires rapid reflexes from the viewer in order to grasp the connections being formulated.

Investigation into the media landscape, invisible mechanisms, the reading of images and the deconstruction of messages is present in each new performance. These works take us into an environment that demands the acceptance of new parameters and different ways of understanding complex audiovisual representation. It is hybrid and multiple cinematic art opening “windows” within a frame, transforming the “digital canvas” into multiple images, voices and texts.

Italo Calvino, in *Six Memos for the Next Millennium*,¹¹ identified multiplicity as one of the principal characteristics of art that would mark the change of millennium. He defines it as a set of “networks, of connections among facts, people and the world”. If it were possible to reduce the aesthetic and semiotic project intrinsic to part of the most recent audiovisual production to a single word, we could speak of an unrelenting search for multiplicity as a way of representing how contemporary human beings know the world. The world is seen and represented as a highly complex web of relationships, where every minute is marked by the simultaneous presence of heterogeneous elements, unfolding at a dizzying speed that transforms the events, contexts and functions of the constructed message.

I relate this multiplicity to my live audiovisual performance project COTIDIANO, which is capable of fusing techniques, poetic languages, sound and music toward a single objective: live audiovisual production, the performance itself. I define the message as the content of the performance — the non-story, the image, the sensation. What does one want to show or say? Through free and direct choices, the filmmaker and performer transforms personal experience into style, producing “image-signs” as a translation of their “imaginative personal truths”.

¹¹CALVINO, I. (1989). *Seis propuestas para el próximo milenio*. Trans. Aurora Bernárdez and César Palma. Barcelona: Círculo de Lectores. 2010, 9th ed.

The Gaze and Cinema

We could say that it is not the filmmaker who makes the film, but the film that makes the filmmaker. The subject I address in COTIDIANO is reality, everyday life — something of which I am clearly a part and a reality that is also part of me. In this reciprocal exercise, there are several interrelated degrees of subjectivity. The question is not to object to looking at reality, but to mix one's own subjectivity with the subjectivity of another. There are no fixed rules; everything functions as a kind of pact founded on mutual complicity.

The perception of real events will always be intimately connected to the imagination. No gaze is free from itself when it looks outward. In developing COTIDIANO, I observe, and in looking I also see myself. I imagine and move toward what I imagine; then I leap to the opposite side, toward the unknown, which is often stronger and more intense than I had imagined. The cinema of reality is the art of encounter: an encounter with what you imagine, which ultimately differs from what you had designed beforehand. Any reality is an extension of yourself, and you are an extension of reality.

What matters to me in this project is to begin moving reality in order to see it from other angles and perspectives. Reality is so stratified and calcified that I would like to make it speak, to allow it to manifest itself through strategic movements: to search for ways of revealing something, of making an experience evident and demonstrating it through images manipulated in real time. Reality is not realistic.

Looking at the world through an optical device and framing reality already implies a powerful subjective dimension. I find it difficult to remove subjectivity from everyday life.

When planning the idea and filming of COTIDIANO for a Live Cinema session, you begin a process of multiple selections, from macro to micro, from the whole to its parts. You determine a real space and prepare the place from which your gaze will operate. You find a place that allows you to become lost. You intensify a necessary loss of control.

This dialectical movement between what comes from within and what comes from outside generates a space in which the film resides. What matters is not losing sight of this place, which is in fact a flow where things are shuffled, emptied and momentarily revealed. This is the place of the camera switched on in front of someone or something. It is the moment — one of the many magical moments in the process.

As you move toward the object of a film and press the button that releases control, everything changes: your certainties disappear and you exchange the place of an imaginary world for the rawness of a reality directly before your eyes. You begin to play by associating images and sounds with one another, thereby constructing the time and rhythm of the story. You look at things for a second time, organise chaos, and reinvent the world through the image rather than only in the imagination.

Finally, in the performance COTIDIANO, reality is something hybrid and multifaceted, produced through the incidence of multiple gazes: a mirror of a human being, a culture or a country. It is founded on action and reaction; a proposition triggers a movement, and that movement produces a reaction. This attitude of immersion reflects a desire for investigation, a disposition toward debate and mixture, and a desire to live a little closer to a reality constructed and invented in the present tense.

The Process

The Film

To make a film, a story, or resources for an audiovisual work, it is important to follow rules that organise what one wants to communicate. Many variables intervene in the composition of a piece, and it is precisely these variables that must be controlled in order to obtain the required results. The creation of the images for COTIDIANO involves both a technical and a creative process: an initial idea, planning, a script, production, filming, editing, post-production, distribution and viewing.

The idea or concept of COTIDIANO comes directly from the creator's concerns about what she wants to tell or express. This is the point of creation itself. Once the idea is clear, a storyboard or mock-up is produced to organise how everything will be carried out. Research is therefore necessary so that the piece can be articulated according to a predefined aesthetic aligned with the concept to be conveyed.

Production organises and plans the entire filmmaking process. It involves research, finding locations and settings for the development of the story, selecting actors according to the character profiles, planning shooting and post-production days, and ensuring that the entire machinery of the film functions properly. The production should adhere as closely as possible to dates established in advance so as to make the best use of the time and money invested. During this process, in which many film professionals participate, everything that existed on paper in the previous stage becomes reality. Contrary to what many people assume, scenes are not filmed in the same order in which they will appear in the final film; they are organised according to factors such as actor availability, studio rental periods and the types of locations required.

During filming, the director decides where to place the camera, how the characters will perform and what tone the film will have. Like an orchestra conductor, the director is responsible for ensuring that everyone fulfils their role. Once the necessary shots have been recorded, post-production begins, and the editing style — the way the story will be told — is determined. The most appropriate scenes and sequences are selected, manipulated and ordered from all the available footage until the final edit that reaches the screen is created. According to Manovich:

*"Montage, or editing, is the key twentieth-century technology for the creation of false realities. [...] One form of this is temporal montage, whereby distinct realities form consecutive moments in time. Montage within a single shot [...] with distinct realities contributing as parts of the same image."*¹²

This is also the stage at which sound is added to the film: the soundtrack and the different effects required by individual scenes. Possible voice-overs are recorded and, where necessary, dialogue from unsatisfactory takes may be re-recorded. Colour can be adjusted; compositing and visual effects can be produced using post-production software; graphics and matte paintings can be added. Once the film is finished, distribution is organised for cinemas, television, or other formats.

Finally, viewing must be considered: the moment when the audience enters the process and either enjoys the story or does not. In this case I set aside conventional distribution and exhibition. My focus is the creation of images for a live performance in which a story — or the sensations of a story — is developed by using stages of filmmaking hybridised with new audiovisual and technological resources. The process of COTIDIANO is explained in the chapter on the development of the practical project.

¹²MANOVICH, L. (2005). El lenguaje de los nuevos medios de comunicación, La imagen en la era digital. Madrid: Paidós Comunicación. 2011, 3rd ed.

Colour

The use and manipulation of colour in COTIDIANO, created for performance and for real-time narrative construction and deconstruction, makes it possible to stimulate new visual languages with their own meanings, translating feelings and emotions experienced by the characters and represented situations.

From my point of view, Antonioni offers an excellent example of the use of colour. His command of electronically generated images enabled careful manipulation of the fundamental elements of the video signal in order to define symbolic and subjective values for the viewer, using different chromatic patterns for characters and situations. Antonioni technically controlled the video signal so that each colour could be given an aesthetic and conceptual meaning.

Understanding that a video image is generated through contributions from the fundamental green, red and blue components, Antonioni selected and controlled these elements and defined an aesthetic role for each component and for their combinations. In *The Mystery of Oberwald*, for example, the blue associated with the Count of Foehn is intensified above the other colours. The Count radiates blue, which spreads across the setting and objects, gradually tinting the space of the action and giving colour a dramatic function. The coldness of the law-enforcement figure is associated with the cold blue of night. Elsewhere, red is associated with passion, green with nature, and so on.

This boldness enabled an innovative and unexpected experience, comparable to forms of compositing explored by Godard and sought by many artists wishing to distinguish their works. The aesthetic choice also permits the exploration of subjective drama through a narrative line of colour addressed directly to the spectator. Through colour, Antonioni communicates feelings that are not always evident in dialogue or character behaviour, creating a direct conversation between author and viewer.

From a different cinematic perspective, Peter Greenaway's *The Cook, the Thief, His Wife & Her Lover* (1989) uses profilmic manipulation to create another form of subjective dramatic dialogue between author and spectator. Sets and costumes change colour according to the dramatic meaning of the scene. The red of the intense passion shared by Georgina and her lover Michael appears in walls, curtains, dresses and other elements before the two characters have exchanged a single word. Greenaway continues this strategy throughout the film, integrating the manipulation into the story and developing a technical strategy for colour within its own dramaturgy.

Eisenstein, in his dramaturgy of form, discusses the possibility of organising relationships between emotion, sound and colour on the basis of subjective and personal sensations, with the intention of defining principles for these connections. Here, however, I present a series of experiments that explore these conditions without attempting to establish a taxonomy of variables.

In my practical Live Cinema work, I use colour as a language defining feelings, emotions and states of consciousness. I associate the characters' emotional states with specific colours. For Maria Luz, I use low saturation, pastel tones and a subtle white atmosphere to characterise her emotional condition. For Julia, I use strongly contrasted colours, predominantly reds and greens, and increase the black levels to describe chromatically her strength and existential character. For Julia as a child, I use blue to emphasise her innocence.

Montage

*"Conflict within the shot is potential montage which, as its intensity develops, breaks through the quadrilateral frame of the shot and explodes its conflict into montage impulses between montage fragments."*¹³

The classification of montage is strongly influenced by music and its compositional structures. Eisenstein drew on acoustic knowledge for his comparisons and named six categories: metric montage, rhythmic montage, tonal montage, overtone (harmonic) montage, intellectual montage and vertical montage. I will examine these forms because Live Cinema, and my present project in particular, experiments with the construction and deconstruction of cinematic narrative.

In metric montage, shots are organised mathematically according to the length of each isolated fragment rather than the relationship of its content to the other fragments. Musical metre provides a model: familiar structures such as the waltz or simple patterns can produce clarity, whereas irregular and complicated measures may create a chaos of impressions rather than clear emotional tension. Variations and mixtures must therefore be evaluated according to the impressions they produce. The filmmaker's involvement lies in the repetition of these measures: perceiving the pulse of the film, or the pulse of the audience, is characteristic of metric montage.

In rhythmic montage, the content within the frame must be considered in determining the intention of the fragment, which may or may not follow a metric formula. Its duration derives from the specificity of the fragment and from the structure of the sequence. Tension is achieved by shortening fragments according not only to the principal movement but also to the cut itself. Eisenstein's Battleship Potemkin provides a well-known example: in the Odessa Steps sequence, the rhythmic march of the soldiers' feet is not synchronised with the rhythm of the baby carriage falling down the steps. The marching cadence is gradually replaced by an accelerated, disordered and unstable movement.

Tonal montage develops beyond rhythmic montage and is based on the emotional tone of the fragment. The general tone includes characteristics of the elements in the scene and the movement of people and objects. Combinations of varying softness or sharpness of focus are typical examples. This montage is based on an emotional "sound", or on reflected light, contributing to a tonal identity combined with movements and vibrations of light.

In overtone or harmonic montage, dominant and secondary tones are considered collectively. It emerges from the relationship between the principal tone of a fragment, its dominant and one of its overtones, understood as the echo of a principal tone.

Intellectual montage is the most complex level. Its principal characteristic arises from the juxtaposition of associative intellectual sensations. Montage is completed by the spectator through concepts they already possess about the world and associate with the edited fragments. In emotional combinations, Eisenstein sought to interpret not only the visible elements of the shots but also psychological associations as a means of constructing an emotional situation.

In vertical montage, Eisenstein drew attention to how audiovisual elements work together to construct an image from the representations contained in each composite fragment, emphasising new sonic and chromatic elements. He reaffirmed principles previously tested in silent cinema through a concept of unity analogous to an orchestral score, in which different instrumental lines are organised vertically while developing horizontally. The simultaneous study of visual and sonic lines makes it possible to evaluate

¹³SERGEI, E. (2002). La forma de la película. Trans. Teresa Ottoni. Rio de Janeiro: Jorge Zahar Editor.

their synchronisation and interaction, including moments of coincidence and divergence within a film sequence.

This category can incorporate elements of the earlier montage categories: contrasts between geometric forms, the plasticity of visual movement and metaphorical associations within the dramaturgy of form. In presenting vertical montage, Eisenstein emphasised meanings produced by colours, tones, music and their associations, already explored in painting and literature. These studies led him to articulate the expressive potential of audiovisual form and the possibility of “seeing sounds in terms of colour and hearing sounds as colours”.¹⁴ His reflections establish a broad field for audiovisual montage, valuing the distinct meanings of sonic and visual elements and providing guidelines for understanding the construction of the audiovisual image.

¹⁴SERGEI, E. (2002). La forma de la película. Trans. Teresa Ottoni. Rio de Janeiro: Jorge Zahar Editor.

Interior Monologue

The introduction of sound into cinema brought profound transformations to filmmaking, including the shift from the mass hero toward popular authors who came to portray individual actions. Eisenstein sought to understand this new technology and to put into practice a theoretical formulation that had been known for some years, one that oriented the new element of cinematic syntax: the voice. He found the concept of interior monologue in literature:

*"...a literary method that suppresses the difference between subject and object, exposing the hero's re-experience in a crystallised form; it was first observed by researchers into literary experimentalism in 1887, in Édouard Dujardin's pioneering 'stream of consciousness' work, Les Lauriers sont coupés."*¹⁵

In interior monologue, the character speaks to themselves, which is very different from "speaking outward". One hears one's own thought in a chaotic way, in a state of excitation in which one becomes aware of oneself looking at and listening to the mind. The syntax of inner discourse corresponds to visual images, producing a conflict between internal and external circumstances. This narrative device was strongly used in Soviet expressionist cinema. Eisenstein understood interior monologue as the successor to intellectual montage, whose representation had been recognised as a landmark in world cinema. Indeed, he never strayed from his central aim of seeking general, fundamental rules for the creation of works of art:

*"The laws governing the construction of interior discourse are precisely the laws that underlie the whole variety of laws governing the construction of the form and composition of works of art,"*¹⁶ *the filmmaker affirmed.*

In my personal project, interior monologue is the type of "dialogue" I chose as the main expressive tool for the characters. They think and speak inwardly; everything circulates in their minds. The piece is based on the inner voice of the principal character. Julia and Maria Luz think aloud but never speak outwardly. They express themselves as if in dialogue, yet the dialogue results from a solipsism inherent to them. Their monologues characterise them, giving them form and meaning. Interior monologue is the dominant language in the process of constructing the film for live performance. In practice, I mix inner dialogue with music, environmental sounds and thoughts, thereby creating a visualisation of dreamlike images.

¹⁵SERGEI, E. (2002). La forma de la película. Trans. Teresa Ottoni. Rio de Janeiro: Jorge Zahar Editor.

¹⁶Ibid.



Fig. 7.1. Frames from COTIDIANO. Interior Monologue.

Musical Images

The visualisation of music has a long history whose chronology of inventions develops in parallel with that of cinema. The camera obscura was already known in astronomy in the thirteenth century, while the “magic lantern”, a precursor of cinema, was popularised in the seventeenth century by Athanasius Kircher. In the following century, devices appeared that projected lights activated and synchronised by mechanical mechanisms. Louis Bertrand Castel, mathematician and philosopher, created the “Ocular Harpsichord” around 1730, an organ-like device that generated coloured light in response to the movement of its keys, with modulation analogous to music.

The visualisation of music gained further momentum after the invention of electricity, which offered new ways to activate light-projection systems. In 1915, painter Wallace Rimington accompanied the New York Symphony Orchestra with his electric colour organ in a synaesthetic presentation of Scriabin's *Prometheus: The Poem of Fire*. The composition included precise colour indications in the score. Scriabin wanted the audience to wear white so that coloured projections would be reflected on their bodies, filling the entire environment.

These practices can also be related to Isaac Newton's work. In 1704 Newton published *Opticks*.¹⁷ In his studies of light refraction, he demonstrated the decomposition of white light into seven principal colours: red, orange, yellow, green, blue, indigo and violet. He constructed a disc containing these colour bands which, when rotated, appeared white. The same research demonstrated mathematical relationships between colour wavelengths and frequencies, on a scale analogous to music.¹⁸

Associations between seven fundamental colours and seven musical notes were subsequently developed. Although Scriabin and Castel did not simply adopt Newton's model, their systems also contained a logic grounded in physics and mathematics. Scriabin followed a musical basis related to the circle of fifths. Castel's ocular harpsichord associated intermediate colours with musical accidentals, and Scriabin extended these ideas to facilitate the construction of a chromatic musical keyboard.

Not all associations, however, were mathematically based. In 1855 Joachim Raff associated particular instruments with colours, while Rimsky-Korsakov linked musical notes with sensations and colours in accordance with synaesthetic interpretation. Such associations involve broad cultural knowledge and complex interrelationships.

“Understanding that the chromatic phenomenon requires openness to the contributions of the physics of light, optics, physiology, neurology, psychology, chemistry, mathematics, anthropology, sociology, history, and so on. No single science has invalidated the contributions of the others, although there has been no efficient communication between them toward a deeper understanding of the phenomenon of colour.”¹⁹

Returning to the development of visual music, the abstract cinema of the 1920s brought new contributions to the translation of music into image. Artists including Marcel Duchamp, Hans Richter, Fernand Léger, Walter Ruttmann and Viking Eggeling brought their aesthetic concerns — particularly movement — into cinema. Variations in the rhythm of frames orchestrated simple images, objects,

¹⁷NEWTON, I. (1996). *Óptica*. Trans. Torres Assis Andre Koch. São Paulo: Edusp.

¹⁸Light and its components are graphically represented as a sinusoidal wave with a given frequency, wavelength and time. Frequency is measured in hertz (cycles per second) and is the inverse of wavelength: the shorter the wavelength, the higher the frequency. Wave height represents intensity.

¹⁹GUIMARÃES, L. (2000). *La información de color*. São Paulo: Annablume.

drawings and paintings into a silent musicality. Eggeling's *Symphonie Diagonale* was a graphic film filled with conflicts among forms, spatial dimensions and volumes within the limited quadrilateral of the image.

Hans Richter, Walter Ruttmann and Viking Eggeling developed experimental forms of animation by painting images on negatives and drawing in pencil on long rolls of paper.²⁰ Duchamp, searching for three-dimensionality, constructed a "glass machine" producing optical illusions and visual problems through rotating discs that created circular and spiral forms, as seen in *Anémic Cinéma* (1926). Richter's *Rhythmus 21* explored static and moving moments, rectangles approaching and receding, and contrasts between black and white surfaces. Its cadence and orchestration resulted from the organisation of time; Richter drew attention to the idea that the image itself performed the song.²¹

Walter Ruttmann's abstract and poetic *Lichtspiel Opus I* (1921) attracted Oskar Fischinger to cinema. Fischinger would work specifically with visual works inspired by musical compositions and became a major creator of the concept of visual music.²² His filmography includes special-effects work in Germany and the United States as well as the development of multimedia projection devices intended to unite music and image. On one occasion, accompanying a Chopin piano composition, he used multiple film and coloured-light projectors in a configuration resembling later VJ presentations.²³ He also developed versions of the Lumigraph, capable of producing coloured projections through manual pressure on a rubber screen.²⁴

Visual Music, inspired by classical concert performance, sought from its beginnings to create a visual music comparable to music heard by an audience. Some filmmakers showed silent films without musical accompaniment; other projects deliberately explored the artist's sensitivity in visually interpreting music. The image orchestrated by music became a visual symphony, a visual polyphony perceived as a sensory experience. The image had to be "felt" musically, whether expressed through coloured lights, organ music or other imagery.

Mechanical, electronic and computational systems use associations between colour/image and music based on systems of reference. Technical knowledge of sound, music, colour and image is necessary for artistic control and for defining the reference system to be implemented. The enormous universe of possible combinations has generated research in areas including sound engineering, electronic music and other fields. Newton's studies provided only a partial guide, however, because light communicates more than colour: brightness, greyscale, contrast and other information also contribute to the image.

Visual music is grounded in music, colour and grey tones; the musical image is therefore whole and integrated. It is necessary to recover and deepen studies of image luminosity, using new instruments, information and analytical challenges that unify the intended approach to a film. In *COTIDIANO*, the images are unified through manipulation of saturation, black levels, isolated brightness and carefully controlled chromatic treatment for each emotional situation according to the needs of the scene.

²⁰Example of Viking Eggeling's *Symphonie Diagonale*: <http://www.youtube.com/watch?v=jzQfzBUWHTc>

²¹RICHTER, H. (1993). *Dadá: arte e antiarte*. São Paulo: Martins Fontes.

²²SALLES, F. *Imágenes musicales o música visual — un estudio sobre las afinidades entre sonido e imagen, basado en la película de Walt Disney, Fantasía (1940)*. Master's thesis, PUC São Paulo, 2002. <http://www.mnemocine.com.br/filipe/tesemestrado/index.htm>

²³Supported by the Guggenheim Foundation, this collective projection, titled *R-1, a Form Play*, was exhibited in Los Angeles and San Francisco.

²⁴Fischinger's Lumigraph was licensed in 1964 by the producers of the science-fiction film *Time Travelers* (Robert Dunham, 1966), in which the machine is depicted as capable of satisfying people's sexual desires.



Fig. 7.2. Frames from COTIDIANO. Musical Images.

Multiple Screens — Peter Greenaway and Live Cinema

*"I don't think cinema has ever been alive; I don't think you make cinema; I don't think any of us has seen a film. We have only seen more than a hundred years of illustrated text."*²⁵

Peter Greenaway is one of the most controversial minds of our time: an experimental filmmaker and painter and, above all, an exceptional artist. His work is a moving canvas, an exquisite collection of unforgettable images, sometimes uncomfortable and at other times shocking. Greenaway attempts to revolutionise visual art with each new project, something evident in the evolution of his work and in his meticulous exploration of film structure. With *The Draughtsman's Contract*, Greenaway established himself as a major English director, a position reinforced by *A Zed & Two Noughts*, which revealed his fascination with parallels, balance and symmetry. His films became exhaustive essays and, at times, studies of obsession, as in *The Belly of an Architect* (1987), whose artist protagonist is gradually absorbed by a spiral of obsessions that ultimately destroys him. Greenaway's characters are frequently destined to travel difficult and tortuous paths.

Greenaway's eccentricity and avant-garde ambition have not prevented worldwide success. Films such as *The Cook, the Thief, His Wife & Her Lover* and *The Pillow Book* reached wider audiences, yet for him the cinematic screen is insufficient. With an exquisite aesthetic sense, he divides and multiplies screens, incorporates calligraphy and animation, and constructs extravagant visual situations that surprise the viewer. This tireless exploration of images and their boundaries reached a climax in the ambitious *The Tulse Luper Suitcases* project.



Figs. 8–11. Peter Greenaway, images from *The Tulse Luper Suitcases*.

²⁵GRAS, V. W. (2000). *Peter Greenaway: Interviews*. Mississippi: University Press of Mississippi.

His films constantly remind us that we are viewing a work of art. Each is a compendium of information and references to other artists and to Greenaway himself. In one film, for example, he studies one of the artists he most admires, Rembrandt, particularly *The Night Watch*, reflecting on the consequences of the painting for the artist's life and decline. Greenaway's cinema is bold and dense; every frame is planned as a set of layers that gives it a visual richness and thematic character unusual in contemporary cinema. This is why he argues that the cinema we have is insufficient:

*"Because we are lazy, because we are indolent, because we are not radical, and because we do not want to try hard enough."*²⁶ — Peter Greenaway

Numerous avant-garde movements recur cyclically, bringing concerns, innovations, provocations and controversy. They generate confusion and questions and, at their best, open paths that others will follow. Greenaway's cinematic work can be understood through this avant-garde spirit. His provocations emerge from a search for the concept of the work without abandoning storytelling or filmmaking.

It is difficult to place Greenaway's cinema within a single clearly defined movement. As a multidisciplinary artist, he works across cinema, painting, visual arts, virtual games, television and other fields, influencing and being influenced by each. Throughout his extensive production he has experimented with different artistic and cultural forms in a continual search for innovation. Among the technologies that transformed cultural expression, the digitisation of image and sound is especially important for understanding his work.

Nicholas Negroponte's²⁷ *Being Digital* described aspects of human life transformed by the digital paradigm, including the overcoming of material and physical-distance barriers and changes in how we think and express ourselves. Within this context, binary zeros and ones act as a unifying agent capable of establishing dialogue among different arts and cultures through a minimal common alphabet. Greenaway engages with this universe of art and technique to challenge digital audiovisual practice and the idea of "software films".

Without fixed formulas or definitive models, Greenaway has continued to investigate digital electronic compositing since the 1980s. In *Prospero's Books* (1991), talking heads and other visual components were reconfigured into increasingly complex formats, a tendency enriched in *The Tulse Luper Suitcases* trilogy (2003–2004). Transparency, movement, frames and other visual components "choreograph" with the cinematic frame, which increasingly becomes an element of the scene. Special effects are incorporated into the story, creating new categories of montage and new visual conflicts that justify cinematic post-production.

The use of multiple cameras allowed Greenaway to expand concepts of *mise-en-cadre*, conflicts within the shot and categories of montage, extending the theoretical field of Eisenstein's dramaturgy of form. Greenaway demonstrates the expertise of an editor with extensive command of editing techniques, placing him among those who, like Eisenstein, conceive cinema through montage.

Greenaway reconstructs his cinematic trajectory through the technological framework introduced by digital technology and new procedures for constructing the audiovisual image. Non-linear editing, HDTV, vector painting, graphic animation and other digital technologies gave him what might be called "the pleasure of painting". The electronic brush reconfigures the older watercolour and expands creation into seemingly infinite possibilities. The size, transparency and opacity of the digital canvas update older limits of composition, while movement, sequence and montage add dynamic dimensions of space and time.

²⁶GRAS, V. W. (2000). *Peter Greenaway: Interviews*. Mississippi: University Press of Mississippi.

²⁷Professor and founder of the Media Lab at the Massachusetts Institute of Technology (MIT), with a strong presence in computer science, where he directs research in multimedia.

In his multimedia cinema or Live Cinema, Greenaway presents a synthesis of his arts, producing exchanges between art and technology. He investigates compositions, repetitions, interactions, montage and effects that build an extensive system of references in dialogue with established audiovisual language. It is a continual intellectual challenge dedicated to searching for a new cinema — or reinventing cinema itself — through a circular process of new experiences that returns to the medium's origins.

By revisiting Soviet expressionism, French impressionism, abstract cinema and other innovative early tendencies, Greenaway rediscovers cinema through contemporary technological support. His multiple-screen montage reflects his interests in painting, music and literature and confronts what he often calls the “tyranny” of the frame, actors and camera. His audiovisual career began as an editor in British television, and he continues to operate as an expert live editor of expanded cinema.

Working with different narratives simultaneously and without a linear structure is one of the investigations Greenaway began with *A TV Dante*. Each work develops new formulations through multiple screens. Parallel and simultaneous visual narrative lines are not fixed to conventional roles such as narrator or character. Changes among layers, formats, transparencies and compositions expand possible narrative combinations and demand an attentive gaze from the spectator. Multiple screens intensify this complexity because sound and image can be combined across layers with different visual treatments.

Eisenstein's dramaturgy is therefore revisited and expanded by Greenaway within a landscape of new technologies, while retaining fundamental principles of unity and diversity. Both filmmakers' attitudes toward the nature of the cinematic image generate profound reflections on cinema. Their conception of cinema as a synthesis of the arts draws on music, theatre, literature and painting. Both also looked toward Eastern culture and traditions of writing and theatrical symbolism as sources for cinematic thought.

Recognising Greenaway's distance from Eisenstein does not imply divergence; rather, it reveals innovation and continuity in relation to the theoretical work formulated by the Russian filmmaker. Constructed montage, parallel montage, visual counterpoint through superimposition, and minimalist montage with sophisticated multidimensional compositions are examples of creative possibilities for the development of a new cinema.

From its origins, cinema has taken science as a conceptual reference, while the arts more broadly have lived alongside technological challenges that continually update their forms of expression. Concepts from physics, mathematics and digital systems provide new ways of thinking about matter, form, rhythm and complexity. Geometry gives way to irregular organic forms; fractal thinking influences multiple fields; metrics, rhythms and harmonics continually mutate. We must therefore remain attentive to the new rhythm of multidimensional polyphony.

Structuralism in Greenaway and formalism in Eisenstein formed important methodological bases for their work. Both adopted mathematical concepts such as symmetry, metric, scale and proportion to justify aesthetic decisions in framing and montage. Scientific paradigms themselves change — Euclidean mathematics toward fractal mathematics, classical mechanics toward quantum physics — just as cinema and the arts respond to technological change. Innovation is inscribed throughout Greenaway's work. His persistent search for renewal encourages continued investigation of new solutions to longstanding problems.

Physical Space and the Audience in Audiovisual Performance

The relationship between space and audience is extremely important in performance generally, not only in Live Cinema. Dialogue and different levels of interaction can arise only through this relationship. A Live Cinema performance occurs in a space that encompasses the performer, their tools, projectors and interfaces created specifically for the performance, as well as the audience.

Simultaneous projections and their coexistence with objects or other spatial elements create an audiovisual experience in which the spectator establishes a path and makes connections between reality and fiction. Screens and projected images have crossed the boundaries of conventional cinematic exhibition and are exploring new formats for display and contemplation. New video-architectural landscapes emerge: buildings whose façades are transformed by projection, video mapping, multiplied screens, images and sound occupying space, and interactive play between real and virtual objects. It is a spectacularisation of visibility within the artistic field: everything can become a projection surface and everything can be projected.

To renew forms of cinematic production and reception, devices that encourage decentralised and sensory experience become important: multiplying projection areas, transforming image supports, combining art forms, moving away from conventional film language and encouraging bodily mobility among spectators. These elements allow the spectator to interpret and construct meaning freely through their own filmic experience.

The physical space can — and perhaps should — be designed by the performer, because it is the place in which the performance can be studied in relation to its objective. The audience may be seated, standing, walking through the space, or attempting to participate in the story being created live. The space is designed to generate stimuli and provoke emotions and sensations, making use of the plastic qualities of screens, fabrics, sculptures and any other background or scenic elements the artist chooses in order to establish an aesthetic dialogue with the space.

“Once the image is projected onto a screen (or wall), the spectator can intervene by crossing the beam of light that forms the image. The image, in turn, will be formed and projected onto the human body, passing across it as an omnipresent obstacle. Virtual reality, telepresence and interactivity have been made possible by recent digital technology. But they have also become real through a much older technology: the screen.”²⁸

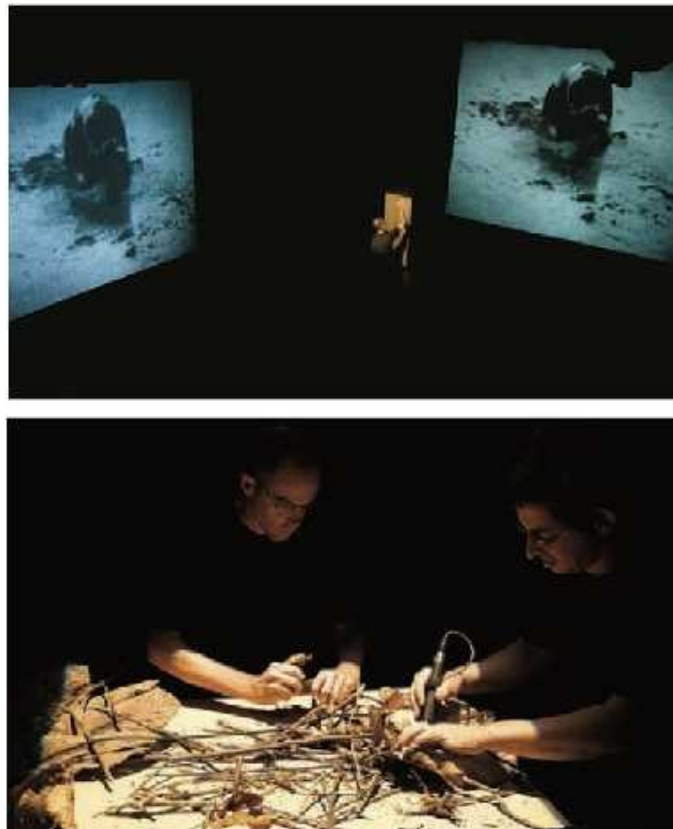
The performer may not have control over the architectural space in which the performance takes place. In that case, elements that limit projection visibility must be considered, along with power outlets, cables, screen size, projector distance and sound projection. In every case it is advisable to have a floor plan or to visit the venue before performing. There is also the possibility of creating a site-specific performance, in which the performer develops a customised setting for the intervention. For the performance of COTIDIANO, I will use a space in the exhibition hall of the Faculty of Fine Arts.

Within the circuit of live-performance festivals, I would like to highlight Mostra Live Cinema, created in Brazil five years ago. The festival brings together national and international artists exploring new interactions between art and technology, particularly in audiovisual performance. In this context, each creator is responsible for developing their own scenographic space for the performance.

²⁸MANOVICH, L. (2005). El lenguaje de los nuevos medios de comunicación, La imagen en la era digital. Madrid: Paidós Comunicación. 2011, 3rd ed.

Cao Guimarães – O Grivo

Cao Guimarães presents work with a highly elaborate, poetic documentary/experimental aesthetic. His practice moves between cinema, photography and the visual arts. For this work, twelve scenes were scripted. At one point, the subtlety of silence explored the sound of air produced by small fans. The noises of branches and dry leaves were produced live to simulate the sound of ants walking. A steel plate was suspended and scratched at an appropriate, strident moment while images of a dismembered pig were projected; this action is called Anatomy Lesson. Two screens and a large array of unconventional instruments were used.



Figs. 12–13. Cao Guimarães — *Live Cinema performance, Anatomy Lesson*.

Cine Macalé

The concept of Cine Macalé embraces the precarious quality of 8mm film within an unlikely multimedia installation in which two film projectors enter into dialogue with modern digital technology, creating a mosaic full of symbolism and emotion. Super 8 footage, frequently out of focus and superimposed, creates a contemporary reading of the images, directed by Macalé and his guitar.

Jards Macalé, author of *Vapor Barato* and *Movimento dos Barcos*, worked with Waly Salomão — a violinist and musician for Gal Costa and Caetano Veloso, an actor, and a composer for Nelson Pereira dos Santos, and a personal friend of Lygia Clark and Hélio Oiticica. Macalé is one of the most irreverent and original figures in Brazilian popular music.

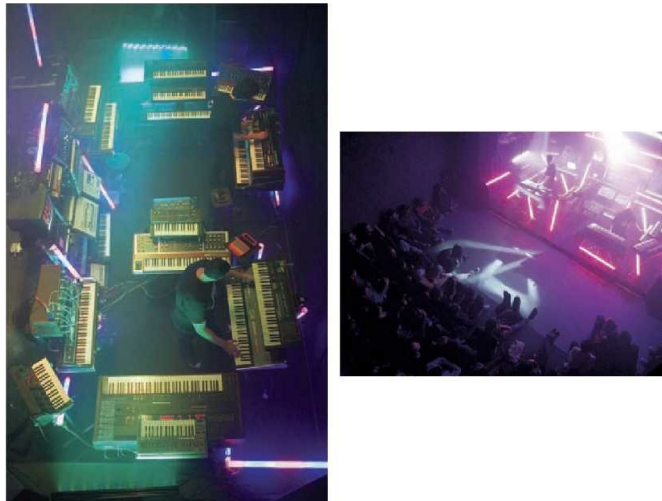


Figs. 14–15. Jards Macalé — Live Cinema performance, Vapor Barato.

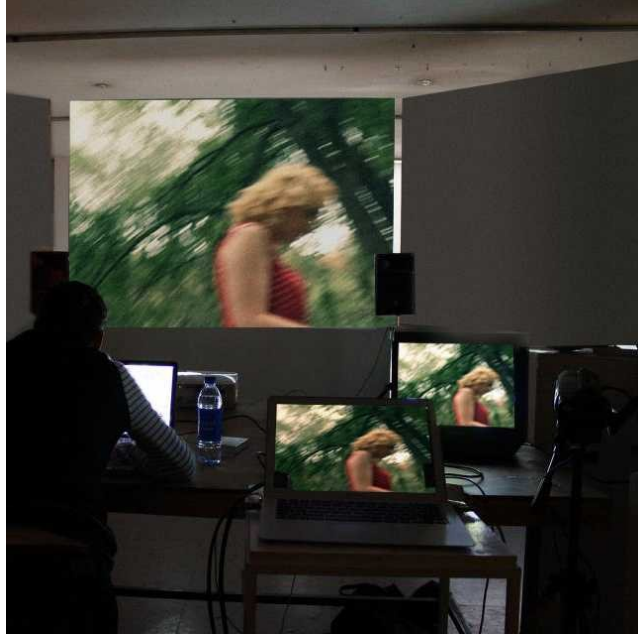
Retrotech

Retrotech is an electronic-music group created and produced by pianist, music producer and sound engineer Carlos Trilha, with musician André Dessandes and designer Alessandra Marfisa. Using analogue synthesisers and electronic drum machines from the 1970s and early 1980s, they present original compositions inspired by Kraftwerk, Vangelis, Cabaret Voltaire and Depeche Mode.

In performance, Retrotech's scenographic space is carefully designed to correspond with its music. It is like visiting a museum of electronic music. The group builds a special projection set using generative images synchronised through software created specifically to support the performance.



Figs. 16–17. Retrotech — scenographic space, Live Cinema performance.



COTIDIANO — live performance setup, personal archive.

Digital Space — Live Cinema and the User Interface

To work with live audiovisual performance, disk space, RAM, the processor (CPU, preferably very fast) and the computer's graphics card must be considered. These elements determine the laptop's ability to execute commands in real time. One minute of uncompressed video can occupy more than one gigabyte of disk space.

A good processor is required to manipulate many layers, apply audio and video effects and work at a suitable resolution. To improve computer performance, it is advisable to maintain a dedicated Windows or OSX installation with as few applications as possible, or to create a specific user account for the selected software.

Optimisation and compression are essential to a good performance. Appropriate compression preserves much of the quality of filmed material while limiting file size. Various codecs²⁹ can be used, including Photo JPEG, Cinepak, Sorenson and Animation, and the codec should be chosen according to the software used by the artist. Resolume, for example, uses the DXV codec, which decompresses video frames on the GPU rather than the CPU and is therefore particularly fast. Indeo 5.11 and PICvideo M-JPEG can also maintain good image quality without requiring an especially powerful CPU.

It is advisable to render audio and video separately for better organisation. If the audio associated with a video needs to be changed, the entire piece does not have to be rendered again. Rendering them together can also restrict the use of BPM because file duration is quantified by frame count, which can make perfectly looping material at certain rhythms impossible. Audio compression is neither necessary nor recommended. On Windows, QuickTime files with DXV, AVI with PICvideo/M-JPEG, or Indeo 5.11 are recommended; on Mac OSX, DXV or Photo JPEG can be used when rendering QuickTime files.

Files can be rendered at a minimum size of 640 × 480 pixels with the codecs mentioned above. With square pixels, the image is not interlaced and each rendered frame can appear as a keyframe. PAL square-pixel resolution is 768 × 576, while the NTSC equivalent cited here is 720 × 540.

There are many software options for performing audiovisual work, including Resolume Avenue, Modul8, ArKaos, Tokyo, Quartz Composer and environments such as MAX/MSP/Jitter, Pure Data and Isadora. In the latter systems, users construct their own interfaces from library objects, connecting them according to the parameters of each object.

I personally use Resolume Avenue because of its intuitive interface and because it provides what I need for my own work. Since I explore cinematic language, I tend not to use many of the filters and resources available in these programs, preferring a simpler and more direct language. Even so, an exclusive interface can be created for a Live Cinema project. One example is the development of a dedicated real-time cinema-editing interface designed to allow performers to select clips intuitively, systematically, quickly and accurately. The use of the hands as a control mechanism is important so that interaction can be adjusted and manipulated during preview and playback.

²⁹A codec (coder-decoder) is a specification, implemented in software, hardware, or both, that transforms a data stream or signal, encoding it (often for transmission, storage or encryption) and recovering or decoding it for playback or manipulation. Codecs are widely used in videoconferencing and media broadcasting. Most codecs are lossy, sacrificing some information for a smaller file size; lossless codecs exist but are rarely worth the size increase except where the data will undergo further processing, since repeated lossy encoding eventually degrades quality substantially.

“In order to help the director with the highly complex task of editing hundreds of clips that make up a film, the shots must be grouped into a structure that represents the narrative structure of the film, while still allowing for unplanned exploration and accommodating flexibility of time. This means combining the spatial structure of a sampler with the time-based structure of an elastic sequencer — something that is normally a challenge for electronic music software to handle well live. Filmmakers want to be able to cut freely, change characters, edit a scene rhythmically, and construct new meaning in each performance, while still maintaining overall narrative coherence. To that end, different visual representations of narrative structures and notational strategies are being investigated, ones that best allow shots to be structured into an interactive score for film improvisation.”³⁰

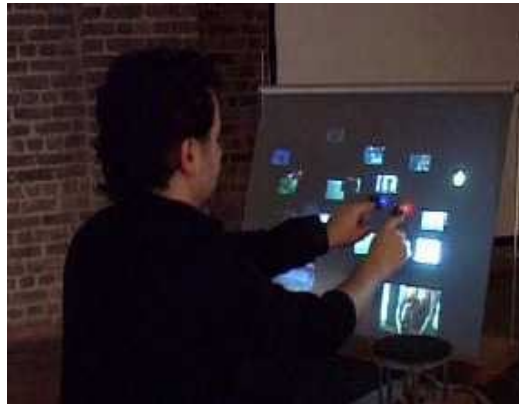


Fig. 18. Michael Lew — Interface for Live Cinema



Figs. 19–20. Bruno Vianna — Interface for Live Cinema; Peter Greenaway — Interface for Live Cinema.

³⁰San Francisco Performance Cinema Symposium. <http://www.kether.com>

Development of the Practical Project — Live Cinema Performance — COTIDIANO

Based on the reflections and research discussed so far, I find a mixture of concepts relating to the expressive languages of audiovisual creation. I feel the need to delimit the existing categories and to refer to formal aspects of these languages.

According to Michael Lew,³¹ these practices can be categorised as follows:

Graphical Cinema

Originating in the rave scene of the 1980s, this genre belongs to club culture and the aesthetics of music video. Video projectors began to invade clubs, leading to the proliferation of the VJ (video jockey), the natural extension of the DJ into the visual domain. Two- and three-dimensional graphics are generated in advance using design and editing software and then animated live. Their graphic style commonly draws on Pop Art and psychedelia.

Abstract Synthetic Cinema

These works are produced from mathematical models and programming processes. The film becomes an abstract synthesis in which the artist-performer can control parameters such as rhythm, colour, form and light. Its aims include the “development of a dynamic visual language” and “purely graphic choreography”.

Camera-Based Cinema

This category describes experimental filmmakers and video artists whose primary raw material in live performance consists of camera-captured images. Both personal footage and found images are used. At the more experimental end of narrative practice, some artists have begun producing works specifically for live sections, simultaneously incorporating narrators, musicians, actors and dancers.

Although in my view there are more categories than those mentioned above, I will focus on Camera-Based Cinema, which is the style that interests me most. Using this category, together with research into authors discussed in the theoretical part of this work — Eisenstein, Vertov, Walter Benjamin, Deleuze, Couchot, Bordwell, Aumont, Manovich, Plaza, Bruno and others — and concepts of interactivity, contemporaneity, hybridity, art and technology, montage techniques, narrative development and cinematic language, I will describe my process for producing the performance COTIDIANO.

These authors and concepts served as points of orientation during the creative process, although they were often used intuitively or unconsciously. There was no direct cause-and-effect relationship between study and application. Sometimes I had an idea and only later realised that it related to something I had previously studied; at other times unforeseen events and the need for rapid decisions led me along paths learned during the course. In many instances there was no direct relationship with material previously considered. At other moments, however, the references were more conscious: Eisenstein's montage techniques, Antonioni's use of colour and Manovich's description of database cinema were important in deciding how to tell the scenes of the live “film”.

Despite these important theoretical contributions, unexpected events, errors and changes of mind could generate analytical reflections that had not previously been imagined for the project. In this chapter I

³¹LEW, M. Live Cinema: Designing an Instrument for Live Cinema Performance (2004).
<http://mf.media.mit.edu/pubs/conference/LiveCinema.pdf>

describe the process in terms of artistic creation, project development, logistics and reflection on the experience.

The artist imagines, dreams, visualises and constructs through whatever medium of expression they choose. I chose cinema and its deconstruction through the audiovisual performance now called Live Cinema.

The practical realisation of COTIDIANO was conceived as an audiovisual performance. To make the project concrete, I wrote an initial idea, developed a concept and produced a technical shooting script. I handled production, contacted an actress, a director of photography and a second camera operator, while operating the first camera myself. I was also responsible for directing, art direction, post-production, “editing” in Resolume and planning the performance space.

The idea comes from observing everyday life and reflecting on how its intrinsic routine can change us, consume us, kill us, or help us emerge again from our worst nightmares. It means examining the everyday under a magnifying glass, perceiving each moment, feeling that time is relative and that, when one wishes, time can slow down so that every second can be observed and sensations and ways of seeing can be expanded. My intention was to communicate this gaze and its resulting sensations through the camera.

According to the Real Academia Española, the Spanish word cotidiano comes from the Latin quotidianus, meaning “of every day”; the Latin adverb quotidie means “daily”.³² The project explores the subtle distinction between the everyday and the routine:

“There is a subtle difference between the everyday and the routine: personally, I believe that the routine is what one does day after day, whereas the everyday relates more to the community — what happens to everyone, daily. For example, going out to school or to work is routine for each person, but for the community it is what commonly happens to everyone, even when someone has gone to hospital, breaking their own routine. Public transport carries passengers to different destinations every day in the city, but it is not always the same carrier, nor always the same passengers on the same vehicle.”

Synopsis

The project COTIDIANO consists of four characters: Julia, Julia as a child, Julia's older sister and her baby. Julia is a woman obsessed with the meaning of her existence. Every day she searches for an answer to a question that cannot be answered. She therefore clings to the everyday — to habits — in order to stop questioning herself.

After the suicide of her older sister, who had been a reference point in her life, Julia suffers in silence, feels pain in her chest and searches for her true meaning in everything she does each day. Julia wants to be an actress. Through acting, she lives each day differently. She searches her memories for an answer that will allow her to continue living. If she cannot find it, she will have to leave with her sister.

Julia's thoughts and introspections are drawn from lines taken from Clarice Lispector's *A Breath of Life* (Um sopro de vida):³³

“There will be a year in which there will be a month in which there will be a week in which there will be a day in which there will be a moment in which there will be a minute in which

³²PÉREZ, M. M. <http://etimologias.dechile.net/?cotidiano>

³³LISPECTOR, C. (1999). *Um sopro de vida*. Rio de Janeiro: Rocco.

there will be a second, and within that second there will be the sacred non-time of transfigured death."

"Living is a kind of madness that death commits."

"Today is a day of nothing. Today is zero hour. Does a number that is nothing happen to exist? What is less than zero? What begins in what has never begun because it always was — and was it before always? I cling to this vital absence and I am renewed entirely, at once contained and total. Round, without beginning or end, I am the point before zero and before the final point. I walk without stopping from zero to infinity. But at the same time everything is so fleeting. I always was and immediately ceased to be. The day passes at its own pace and there are abysses of silence within me. The shadow of my soul is the body. The body is the shadow of my soul."

"Suddenly things no longer need to make sense. I am satisfied simply in being. Are you? I am sure you are. The senselessness of things brings a smile of contentment to my face. No doubt everything must be being what it is."

"I live in raw flesh, which is why I care so much about giving my characters a body. But I can't help it, and I make them cry for no reason at all."

"Daydreaming is reality." In dreaming, our innermost being asserts itself, and in waking it is the world that makes its demands on us. We never simply are; we are always "being". "Real life is a dream with open eyes (that see everything distorted)." "I never know what will happen in the form of words."

"This is not a lament, it is the cry of a bird of prey. Iridescent and restless. A kiss on the dead face. I write as though I were going to save someone's life. Probably my own. Living is a kind of madness committed by death. For it is in them that we live — long live the dead."

"Time does not exist. What we call time is the movement of the evolution of things, but time itself does not exist. Or it exists, unchanging, and we move within it. Time passes too quickly and life is so short. So I cultivate a kind of tedium. In this way I savour every detestable minute. I want to multiply myself so that I can encompass even the desert-like areas that suggest eternal stillness. In eternity, time does not exist. Night and day are opposites because they are time, and time cannot be divided. From now on, time will always be present. Today is today."

"This is not a lament, it is the cry of a bird of prey. Iridescent and uneasy. The kiss on the dead face."

"Life has never been so present as it is today: it is only a hair's breadth from being the future. To me, time means the disintegration of matter — the putrefaction of the organic, as though time were a worm inside a piece of fruit, robbing the fruit of all its pulp. Time does not exist. What we call time is the movement of the evolution of things, but time itself does not exist. Or it exists, unchanging, and we move within it. Time passes too quickly and life is so short. So — in order not to fall prey to the voracity of the hours and of novelties, which make time pass quickly — I cultivate a kind of tedium. In this way I savour every detestable minute. And I also cultivate the empty silence of the eternity of the species. I want to live many minutes within a single minute. I want to multiply myself so that I can encompass even those desert-like areas that suggest eternal stillness. In eternity, time does not exist."

Night and day are opposites because they are time, and time cannot be divided. From now on, time will always be present. Today is today. I am surprised, and at the same time I distrust how much is given to me. And tomorrow I will again have a today. There is something painful and sharp about living today — the paroxysm of the highest, thinnest note of an insistent violin. But there is habit, and habit anaesthetises. The bee-sting of today's flowering day. Thank God, I have something to eat. Our daily bread."

This synopsis serves as a reference for filming the images and later carrying out post-production, although during the performance what I want to communicate is not normally completely clear. In the end, the spectator assembles their own story. Nevertheless, for organisational purposes, it is necessary to begin with something one wants to tell, with a beginning, middle and end.

For the cast, I chose actress Blanca Berdejo as the older sister, her daughter Manuela as the baby, actress Daniela M. Xandru as Julia, and my daughter Yara as Julia as a child. Sonia Sisó Trasobares was director of photography and George Karja was second camera operator.

The locations had to be very simple so that spectators could recognise themselves in them. I divided filming into interior and exterior sections. The interior was limited to a house: living room, kitchen, bathroom and balcony. The exterior scenes were filmed in a park in Guadarrama.

Developing a technical script helped streamline the recording process and organise scenes in a way that optimised the available resources.

Technical Shooting Guide — Interior

- Waking up
- Preparing breakfast — face, hands, cut fruit, coffee, milk
- Eating breakfast at the table — mouth, chewing, eyes, movement of feet
- Playing with the book on the table — loop
- Red armchair — make-up
- Talking on the telephone
- Listening to music
- In the living room — dancing — long dress
- Crying
- Laughing
- Looking through the window
- Walking from the living room to the kitchen
- Playing with the knife while seated at the table
- Looking for the crystal ball at the window — playing with light
- Chewing gum
- Looking at a magazine on the sofa
- Sleeping on the sofa
- Playing with the bird
- Taking medication
- Going down the stairs
- Going down the stairs as if fleeing

- Doing push-ups on the floor
- Looks with changes of make-up
- Fear — falling to the floor
- Scene with brushes
- Looking at the camera and making gestures
- Looking at the camera and telling stories about her life

Technical Shooting Guide — Exterior

- Inside the car
- Playing with her hair
- Staring into nothingness
- Dancing, spinning around
- Walking along the riverbank
- On the swing
- Walking through the countryside
- Walking forwards
- Walking backwards
- Throwing herself onto the ground
- Going down the hill

During filming, we used an XDCAM EX1 camera generating .mp4 files in HD 1920 × 1080 at 25 frames per second. Audio was recorded on two channels: channel 1 with an external microphone for speech and channel 2 using the camera microphone. The second camera was a Canon 60D generating .mov files, also in HD 1920 × 1080 at 25 frames per second, with audio recorded directly through the camera microphone.

Maria Luz

The shoot with actress Blanca Berdejo took place in a house with her baby and her husband appearing as an extra. Her character is Julia's older sister, Maria Luz. She is important because Julia looks to her as a reference for continuing her own life. Maria Luz was an actress and, having left home very young, left few memories within Julia's family memory. The images of Maria Luz are Julia's memories.

The location was the living room of House 1 and a terrace. The art direction used Blanca's own home as it was. I decided not to alter it, in order to preserve the authenticity of the location and create a more spontaneous atmosphere. For the treatment of this block of images, I used Adobe After Effects CS5 and Red Giant's Magic Bullet Suite 11. I reduced saturation, adjusted black levels, created blur masks and used colour-multiplication masks.

Dream, reverie, performance, memory, recollection and thought are words that describe the actions of this secondary character.



Figs. 21–28. Blanca Berdejo performing Maria Luz — COTIDIANO — personal archive.

Julia

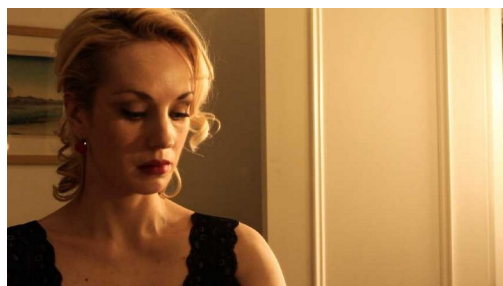
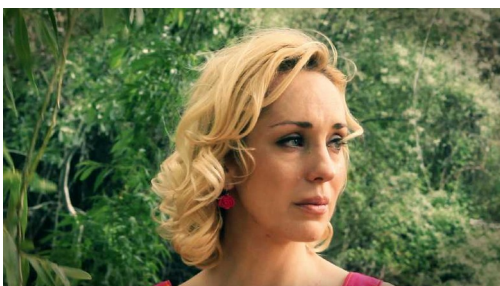
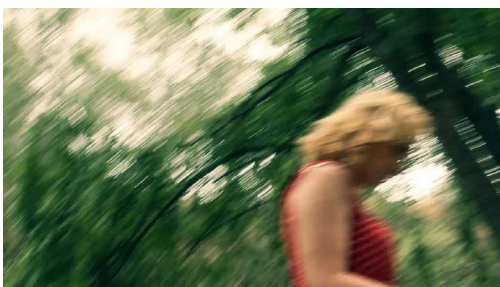
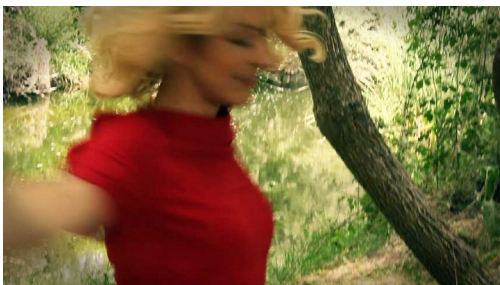
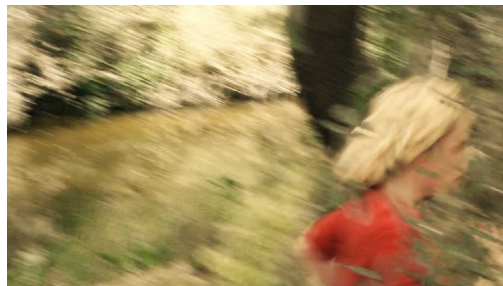
For the filming of Julia, played by Daniela, I wanted to create both interior and exterior images. The exterior locations were in Guadarrama Park near Las Rozas, Madrid. The interior images were filmed in House 2 and on a balcony, using the living room, bathroom, kitchen and balcony.

The art direction of the house was developed according to Julia's thoughts, mentioned earlier and based on Clarice Lispector's texts. For the living room I chose a classical red velvet armchair where Julia could speak about herself, project her thoughts and speculate about her own being. On the balcony I placed a cage with a bird to make visible the protagonist's play with the concept of freedom. Strong colours expressed her strength, while flowing fabrics suggested delicacy. Many books were placed in the living room to emphasise her existential obsession and interest in thinkers. For the park I chose an empty birdcage, allowing Julia to “walk” her image of freedom.

The wardrobe was constructed from strongly coloured garments. For exterior scenes, Julia wore an intense red dress, a red dress with white dots, and a magenta-and-orange dress, colours that contrasted

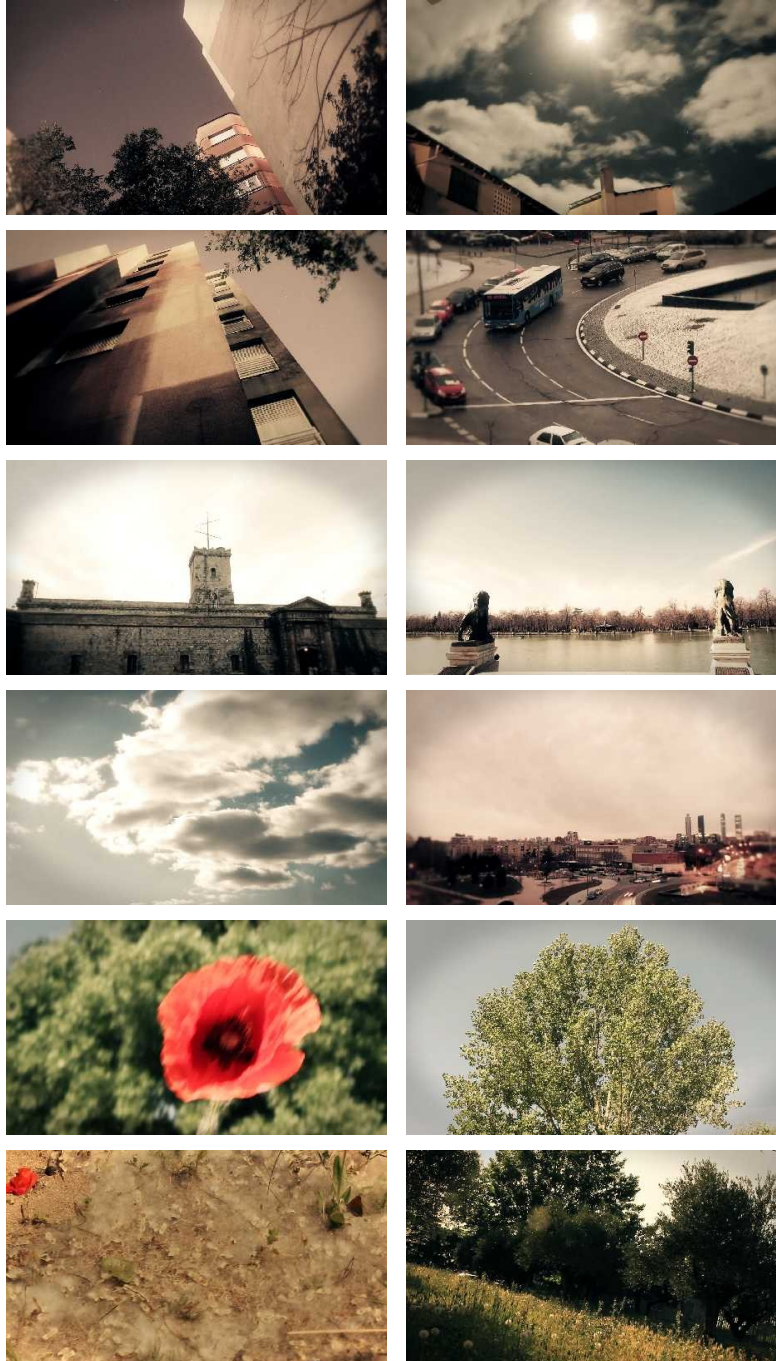
vividly with the green of the park. In the house, she wore a black top for the armchair scenes, a long black dress in the living room, and an intense green dress for the scene with the books. Make-up was natural in most scenes.

Madness, character, existence, thought, memory and illusion are words that describe the actions of the principal character.



Figs. 29–38. Daniela performing Julia — COTIDIANO — personal archive.

To assist the construction and deconstruction of the narrative, I selected additional visual material for use in the live composition and editing: shots of trees, roads, skies with clouds, time-lapses, flowers, beaches, sand, cats, wings, birds and other images.



Figs. 39–50. Resource images — frames from COTIDIANO — personal archive.

To organise the material, I created folders corresponding to each character. I created a folder called “Julia”, followed by subfolders such as “close-ups”, “wide shots”, “resources”, “textures”, and so on, and repeated the process for the other characters. I also created folders for filmed resources, sound resources,

general textures, masks and graphic resources. The important thing is to know the material thoroughly and keep it organised and under control so that improvisation can flow more effectively while maintaining control over what is projected.

The software selected for mixing was Resolume Avenue. Here I will briefly explain the interface in order to make clear some of the steps involved in live audiovisual direction, editing and performance.

The Resolume interface is divided into five areas: Library, Composition, Monitor, Properties and Browser. Each is easily identifiable.

Library: the area where the audiovisual material used in the work is located. Resolume supports video files such as AVI, MOV, QT, MPG, MPEG and SWF, as well as still-image files including BMP, PSD, GIF, JPG and WMF.

Composition: the area in which the mix is generated. It provides options for controlling clips individually, grouped into layers, or as part of the overall composition.

Monitor: used to control output and preview. Preview allows us to monitor files in their “raw” state, before manipulation, while Output displays the mix as it is seen by the spectator.

Properties: provides a wide range of options for modifying files, from simple parameters such as size and speed to more complex elements such as synchronisation through BPM (beats per minute).

Browser: the final area of the interface, containing menus for selecting files, effects and additional inputs such as video cameras and webcams.

This performance is designed to last fifteen minutes, although it can be extended to thirty minutes. The performance space requires one laptop, one projector and one sound amplifier. The image will be projected onto a smooth white-painted surface. I have chosen a simple, uncluttered space in order to emphasise the importance of the image itself. COTIDIANO will be presented as the practical component of this Master's Final Project at the Faculty of Fine Arts, Complutense University of Madrid.

Artistic and Audiovisual References — Background

Our references help us construct a mental apparatus that we consult and appropriate every day. Consciously or unconsciously, references influence my work in an intrinsic, subtle and significant way. To construct a map of references, it is necessary to organise and catalogue these “archives”, establishing classification criteria that help us select from the available information. I have therefore organised the works and artists I consider relevant to this project into three sections: performance and cinema; hybrid audiovisual performance; and video artists.

Performance and Cinema

In this section I would like to highlight directors and filmmakers who, in one way or another, were pioneers in venturing into real-time audiovisual performance.

Peter Greenaway

A film director now considered more broadly a multidisciplinary artist, Greenaway does not hesitate to declare that “Cinema is Long Live Cinema”. He investigates and works with new possibilities for filmmaking, using actors, sets and scenes specifically created for image mixing. He works with multiple screens and large-scale video installations that develop a new cinematic concept.

I would particularly highlight his work *People the Palaces* at Venaria Reale, which attracts my attention because of its staging. Filmed “cinematic” images are projected inside the Palace of Venaria Reale — a UNESCO World Heritage site in Piedmont, Italy — in order to attract the public's attention, stimulate curiosity and construct historical content that, when projected onto the building's walls, transforms its architecture into a multiplicity of historical layers.



Fig. 51. Peter Greenaway — *Live Cinema, People the Palaces* at Venaria Reale.

Francis Ford Coppola

The highly prestigious director, widely known for *The Godfather* and *Apocalypse Now*, ventured into live audiovisual performance with his film *Twixt* (2011), planning a month-long tour before its official release. Coppola stated that he would like to tour personally with his collaborators and live music, creating a different version for each audience. He compared this model to the way opera once functioned.



Fig. 52. Francis Ford Coppola — filming / Live Cinema performance — Twixt.

Léon Louis Vega

Léon Louis Vega, also known as Lionel Combecau, is a French screenwriter, director, performer and VJ based in Brazil. His film *Caos Sem Teoria* is a “film-show”, a feature-length musical in which the music is performed live while the images are manipulated by a VJ in real time. The performance includes collaborations with DJ Dolores, Jam Da Silva, Marion Lemonnier and Carlos Trilha.

Oswaldo Santana

Brazilian artist Oswaldo Santana works with advertising films, experimental work, cinema and performance. He participated in the beginnings of VJing in São Paulo with the VJs Embolex collective and experimented in collaborations involving Nação Zumbi, Teatro Oficina, Motomix, Skol Beats, Beto Brant and others.

Natimorto Live Remix was originally a fiction film adapted from Lourenço Mutarelli's book of the same title, directed by Paulo Machline and edited by Oswaldo Santana. The central idea of the live presentation is to condense the film to one quarter of its original duration while retaining the greatest possible comprehensibility of the scenes, working with the image frames while respecting a linear division.

Beto Brant

Beto Brant is a well-known Brazilian director with a long career in feature filmmaking, including *Os Matadores* (1995), *Ação entre Amigos* (1998), *O Invasor* (2002), *Crime Delicado* (2005), *Cão sem Dono* (2007) and *O Amor Segundo B. Schianberg* (2009).

O Amor Segundo B. Schianberg was born from a reflection on what might happen if a cinematic narrative were revisited and re-edited live by its own director and team, including the actors, thereby exploring more deeply the questions that originally motivated the story but could not be fully developed because of the limitations of commercial cinema. This question led Brant to premiere the film as Live Cinema, creating an audiovisual performance that pushes to its limits the universe of love and coexistence proposed by the director to his actors/characters during the three weeks they spent together in an apartment in São Paulo.



Fig. 53. Beto Brant — *O Amor Segundo B. Schianberg* — Live Cinema performance.

Alexandre Carvalho

Director of *Fluidos* (2009), a project of particular interest to Live Cinema, Alexandre Carvalho is a Brazilian director of short films and music videos, including *Portas da Cidade* and *Vila Prudente*. He created and developed the project *Cine Vivo*.

Fluidos, his feature-directing debut, was produced live with simultaneous filming, editing and projection. Its proposal is to expose the structure of cinema itself. Characters, real people, everyday life, rehearsal and reality, audience and stage all coexist within a live fiction feature. In several locations, actors perform the story for three cameras transmitting live to a real-time edit projected in the cinema. Naturalness is the basis of the work, not only in the script but also in its language and aesthetics. Elements associated with art, photography, direction and sound are found directly in the locations, while passers-by become the narrative's natural "extras". The lack of communication and suspended life characteristic of the contemporary moment are intrinsically present in the story.

The spectator enters the cinema to watch a film that is being made live not far from the projection venue. The live-cinema experience extends beyond the projection itself: people who wish to participate in or observe the shoot are also welcome, either as extras or as observers of the live editing process.



Fig. 54. Alexandre Carvalho — frames from the live-made film *Fluidos*.

Bruno Vianna

Brazilian filmmaker Bruno Vianna directed four short films between 1993 and 2003: *Geraldo Voador*, *Rosa*, *Tudo Dominado* and *Nevasca Tropical*, which received awards at festivals around the world. In 2005 he made his first feature, *Cafuné*, described here as the first Brazilian film released simultaneously in cinemas and on the Internet under a Creative Commons licence. In 2007 he presented *Invisíveis*, a narrative virtual space using augmented reality for mobile phones.

His more recent project *Ressaca* is a feature-length work positioned between cinema and live spectacle. It tells the story of a boy going through puberty in the 1980s, at a time when Brazil itself was undergoing a form of political and economic adolescence. His family suffers the consequences of the economy and the crisis.

The film uses an editing interface called *Engrenagem* ("Gear"), specially developed for the project with support from the Hangar arts centre in Barcelona. The interface originated as Maíra Sala's final project for the Master's in Digital Arts at Pompeu Fabra University, with support from the team behind *Reactable*, the musical-synthesis interface used by Björk and other artists in live performances. *Engrenagem* is a circular touch platform approximately one metre in diameter positioned beside the cinema screen. The audience can follow the entire editing process. The interface makes it possible to visualise all of the film's material and organise it through links defining sequence order; each shot can also be manipulated by changing its position in the film and selecting the type of edit.



Figs. 55–56. Bruno Vianna — frames from the performance using *Engrenagem*.

Felipe Lacerda, Marcos Kuzka Cunha and Ricardo Imperatore

Felipe Lacerda is a Brazilian co-director of the award-winning documentary *Ônibus 174* and edited five films by Walter Salles, including *Central do Brasil*. He has also worked with filmmakers such as Bruno Barreto, Daniel Filho and Tetê Moraes, and with American documentary filmmaker Estela Bravo.

Marcos Kuzka Cunha is a Brazilian multi-instrumentalist and producer who works with sound interventions, including *Citoplasma e Organóides*, presented in an exhibition by artist Ernesto Neto, and *69dpi*, in an exhibition by Antônio Bokel. Ricardo Imperatore is a Brazilian musician and producer whose first work, *SÓLO* (2005), won the 2005 TIM Music Award.

The three artists collaborate on the performance *Riomultipista* (2007). Images are recorded at different locations with different characters in Rio de Janeiro and later remixed live. The two musicians play drums, guitar, bass and keyboards while also generating music with laptops and processing audio in real time. Lacerda remixes the images in connection with the musicians' performance.



Fig. 57. Frame from the performance *Riomultipista*.

Hybrid Audiovisual Performance

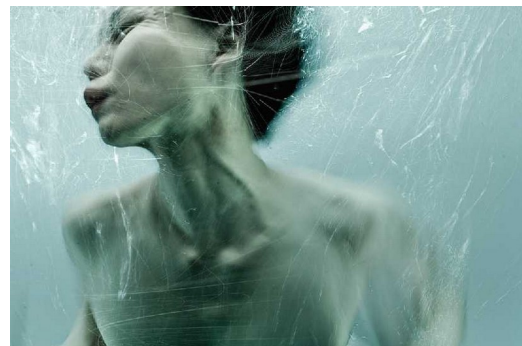
I use the term “hybrid audiovisual performance” because of its multidisciplinary character and its interaction among technology, mathematics, computing, programming, music, electronics and any other discipline that an artist wishes to investigate and test.

Herman Kolgen

Herman Kolgen is a renowned Canadian multimedia artist working primarily with the close relationship between sound and image. He creates installations, videos, films, audiovisual performances and sound sculptures that seek to elaborate a new language and a distinctive aesthetic. His work approaches radiographic impressions and neurosensory stimuli. Inspired by this tension, he creates narrative divisions in which temporal frictions form the epicentre of the work.



Fig. 58. Herman Kolgen performing.

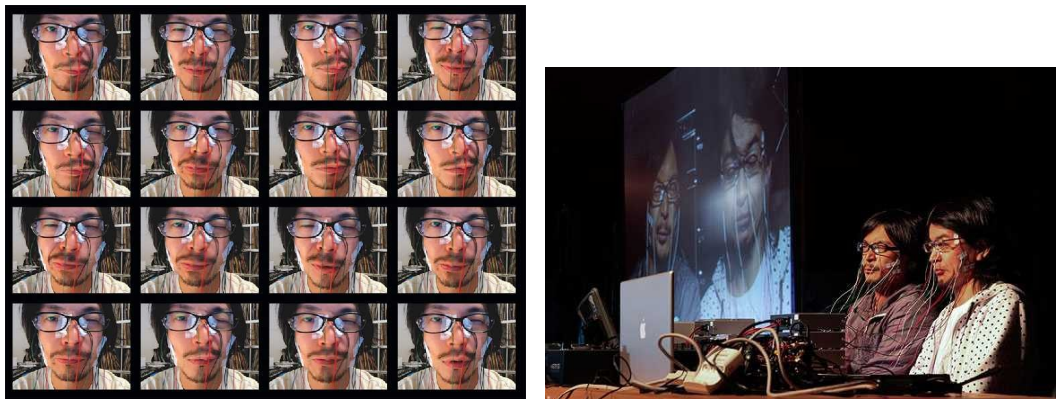


Figs. 59–60. Frames from Herman Kolgen's performance, Inject.

Daito Manabe

Daito Manabe is a Japanese artist, programmer, designer, DJ and VJ based in Tokyo. His performance *Face Visualization, Instruments and Copy* (2008) was presented at major international art-and-technology festivals. Influences can be traced to French researcher G. B. Duchenne and his work on the mechanism of human physiognomy, as well as to Austrian artist Stelarc and his research in *Ping Body*, which recreated robotic movements through sensors placed on his body.

Manabe's early experiments with myoelectric sensors and low-frequency pulse generators appear in *Electric Stimulus to Face*, in which the expression of his face is copied and transferred to another person.³⁴ In the same work, the artist can also be seen creating and manipulating sounds in real time through facial movements read by sensors.



Figs. 61–62. Daito Manabe — *Face Visualization, Instruments and Copy*, using myoelectric sensors.

Mia Makela (a.k.a. SOLU)

Mia Makela, known as SOLU, is a Finnish multimedia artist, teacher, researcher and curator. Through her images she constructs an imaginary poetic universe composed of many layers and a wide variety of resources, ranging from camera-shot material to computer-generated images.

Her work *Kaamos* (2007) is a beautiful contemporary tale about rituals marking the end of the sunlit season and the beginning of winter in countries within the Arctic Circle. It is a journey between light and darkness in which the video signal functions as an organic, meta-narrative element incorporated into the performance. The work addresses the relationship between the individual, natural space and the environment that shapes sensitivity during an almost mystical preparation for Finland's months of darkness.

The narrative is condensed into a small number of repeated images that are recombined within an expanded, suspended time. In a meditative, almost trance-like state, Makela juxtaposes the narrative abstraction of the music video with painterly practices, opening an unusual field within new audiovisual poetics.

³⁴Daito Manabe, performance at Transmediale 11, Berlin, 2011. <http://www.youtube.com/watch?v=nN5p4YgE2WM&feature=related>



Figs. 63–64. Frames from Mia Makela's performance, Kaamos Trilogy.

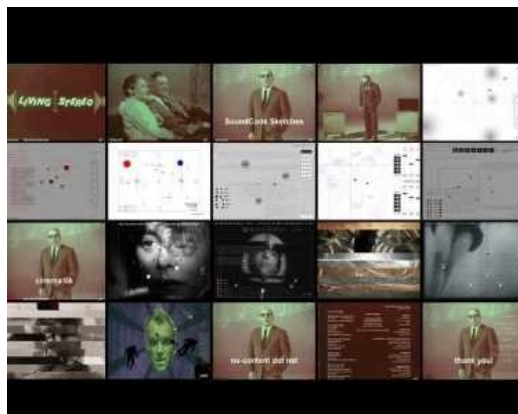


Figs. 65–67. Frames from Mia Makela's performance, Kaamos Trilogy.

Brian Mackern

Brian Mackern is a Uruguayan artist who develops net-art/CD projects and composes self-generative and reactive sound structures and environments. Since 1999 he has worked as a video jockey in different contexts, creating real-time projections, specific visual designs and live animations alongside sound artists and musicians.

His project Living Stereo (2006) investigates the potential of new ways of structuring and mixing sounds and images. He has developed interactive interfaces that enable the creation of changing audiovisual compositions. Appropriated sequences from archival films — by directors such as Andrei Tarkovsky, William Marshall and Alfred Hitchcock — are mixed with abstract interfaces in a playful reflection that reveals different facets of remix culture.



Figs. 68–69. Living Stereo, live at WRO 07, Teatr Lalek, WRO 07 Biennale, Wrocław, Poland. Photo: Marcin Łuczowski.

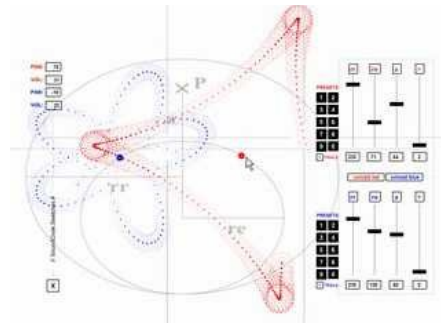
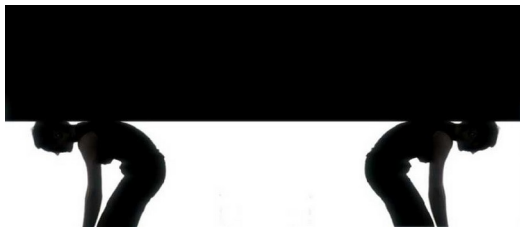


Fig. 70. *Stalker* (1979), Tarkovsky — remixed and convolution-processed music: Eduard Artemyev. Fig. 71. Hypocycloid soundset by Brian Mackern.

Bruno Ribeiro

Also known as Nohista, Bruno Ribeiro is a French audiovisual artist. He considers hearing and vision to be a single, indivisible sense and therefore manipulates images as though they were a musical instrument. In his audiovisual creations he works with themes of perception and illusion, creating immersive and sensory performances. A filmmaker, designer and live performer, in his work *Nobody* (2006) dance meets visual art. Somewhere in an empty universe, an individual redefines his space and its boundaries in a way limited only by imagination. Visual abstraction confronts the movement of an unstable, mechanical body. *Nobody* is performed live: a musical and visual dance to be seen, heard and felt.



Figs. 72–73. Frames from a NOHISTA performance.

The Light Surgeons

The Light Surgeons are an English group who describe themselves as a boutique production company specialising in live performance, video production and installations. They work on both artistic and commercial projects and draw on a network of collaborators. Since 1995 they have worked in a multidisciplinary way and have established an important position within the audiovisual field.

Their work *Super Everything* (2011) is a Live Cinema performance reflecting on identity, rituals and place. The project explores these broad themes through a combination of observational documentary, motion graphics, creative programming and original music, creating a poetic audiovisual tapestry that offers a rich, kaleidoscopic vision of Malaysia's cultural landscape. It asks who we are and how our identities are connected to our everyday environment through different rituals. The images were made in Malaysia, in a journey into its past in order to understand the future.



Fig. 74. Frame from the performance Super Everything.



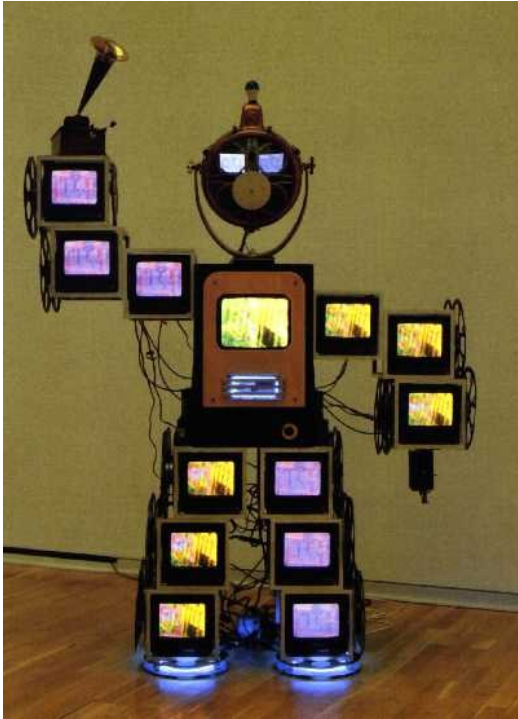
Figs. 75–76. Frames from the performance Super Everything.

Video Artists

Video art emerged in the 1960s, linked to groups and tendencies such as Fluxus, conceptual art, performance and Minimalism. It became an established form of artistic creation alongside the development of mass media, as creators sought alternative artistic applications for analogue and digital media. One difference between video art and cinema is that video art does not necessarily have to comply with cinematic rules: it may dispense with actors and dialogue and may have no conventional narrative or script.

Nam June Paik

A pioneer of video art, Nam June Paik initially developed indeterminate music, which introduced him to the Fluxus experience of his time. He began in performance and experimental music, producing a series of “films” without images. He integrated new technologies with nature through the creation of electronic landscapes and became a major reference for the combination of art and technology.



Figs. 77–78. Frames from works by Nam June Paik.

Bill Viola

Bill Viola is a particularly important reference in the development of many of the projects discussed throughout my work and is one of the most influential video artists of our time. A pioneer of video art who helped consolidate video as a form of contemporary artistic expression, his work is a continuous investigation into questions raised by the human condition and its relationship with the world. Video is his medium and images are his thoughts. The artist invites the spectator to reflect on their existential condition and their relationship with the surrounding environment.

Viola does not overlook the contingency of reality within everyday existence and encourages the necessary dialogue with oneself. In the 1990s, the death of his mother and, nine months later, the birth of his second child marked a turning point in his work, reinforcing his ideas of transformation and continuity between states of existence.

I would like to highlight his work *The Passions* (2005), which seeks to explore human emotions in greater depth. Extremely slowed-down images show emotions at very close range, revealing their intensity and intention, physical expressions and the state of mind passing across each face. The works have no narration or explanation; the spectator is completely immersed in a “moving painting”. The movements are so subtle that they invite us to immerse ourselves in every second and confront the passions they evoke in relation to ourselves.



Fig. 79. Frame from Bill Viola's *The Passions*.



Fig. 80. Frame from Bill Viola's *The Passions*.

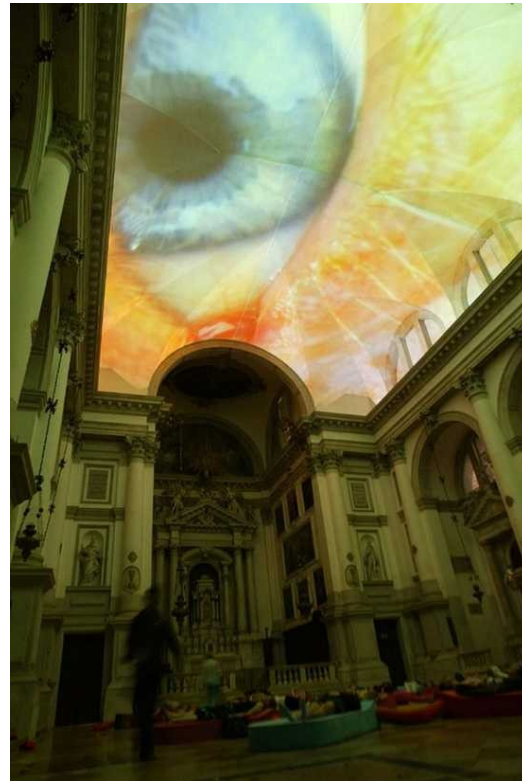
Pipilotti Rist

Pipilotti Rist is one of the most important artists of the "MTV generation". During the 1990s her works had considerable impact because of their narrative character and their emphasis on memory within lived experience. Memory was not treated simply as the past; instead, it became present in every manipulation of video. Her richly coloured images describe stories and sensations within narrative frameworks that construct her distinctive fantastic language. They mix a dreamlike universe with insights from the subconscious, constructed through free association. Her work stimulates the senses and treats exhibition space in a very free and spontaneous way, seeking to make the work "physical" and to generate different sensations in visitors.

*"In general, videos are shown on monitors or flat surfaces, very separate from physical life. Video is a cold medium and we are flesh, organic. I am interested in thoughts, feelings, the subconscious and their similarities with the video image. I do not intend to copy reality; I prefer to approach what the structure of thought might be. We all have layers that overlap and combine — memories, smells and different sensations that coexist within a single moment of the present."*³⁵ — Pipilotti Rist



Fig. 81. Pipilotti Rist — Partit Amistós — Sentiments electrònics.



Figs. 82-83. Pipilotti Rist — Homo Sapiens — Sentiments electrònics.

³⁵PHELAN, P.; BRONFEN, E.; OBRIST, H. U. (2001). Pipilotti Rist. Vienna: Phaidon Press.

Conclusion

Throughout these pages I have followed a path that led me to investigate and analyse live audiovisual performance, allowing me to arrive at several conclusions:

- My experience of Live Cinema is based on a concept and an aesthetic more closely aligned with the visual arts than with purely cinematic language.
- At present, the definition of Live Cinema remains open, allowing room for many interpretations; it may, for example, also be referred to as “Live Images”.
- Live Cinema is not cinema. There is no linear narrative, characters or dialogue in the conventional sense. To speak of Live Cinema, it is necessary to construct and deconstruct narrative.
- The beginnings of cinema itself gave rise to experimentation, and within that experimentation part of what would later become live-manipulated video began to take shape.
- Science played an important role in the advancement of audiovisual processes, since scientists were among the first people interested in audiovisual experimentation. Even when their objectives were not specifically directed toward the artistic field, their research contributed to the development of later audiovisual proposals.
- Contemporary creators express themselves with the tools of their time and, above all, combine new resources and established cinematic concepts with other disciplines. This produces an approach characterised by clear multiplicity, the constant transformation of languages, and an ongoing search for creative solutions and practices.
- What matters is the process; the product is merely a consequence.

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Biographical Note



NATHALIE SIMONETTI

Graphic Designer / Motion Designer / Visual Artist

Nathalie Simonetti is Brazilian and resides in Madrid. She studied Advertising Creation at Mackenzie University in São Paulo, Graphic Design at the European Institute of Design (IED) in Madrid, and Filmmaking at the International Film and Television School of San Antonio de los Baños, Cuba. From 2010 to 2012 she studied the Master's Degree in Art, Creation and Research at the Faculty of Fine Arts, Complutense University of Madrid.

She has eleven years of experience as a motion designer and graphic designer and speaks Portuguese, English and Spanish fluently.

She participated in a group exhibition at La Casa Encendida with the video installation Sampa, as part of the Young Artists — Inéditos 2004 project, and contributed to various electronic-music and jazz festivals by presenting Live Cinema sessions.